C-

YUGOSLAVIA/Nuclear Physics - Installations and Instruments. Methods of Measurement and Research.

Abs Jour : Ref Zhur Fizika, No 3, 1960, 5143

Author : Debenec L. Kramer, V., Marsel, J., Vrscaj, V.
Inst : -
Title : Mass Spectrometric Measurements of UF_6

Orig Pub : Repts. LL J. Stefan 77 Inst., 1958, 5, 33-39

Abstract : A Nier-type 60° mass spectrometer with a resolution of 350 was used to measure the isotopic ratio U238/U235 when UF_6 is introduced into the instrument. The UF_6 can be introduced in a viscous stream through two capillaries, from vessels located in a thermostatic bath. One vessel contains UF_6 with natural contents of isotopes. The measurement of the isotopic ratio was carried out by comparing the intensity of the mass lines 330 and 383 in multiple magnetic or electric scanning. For exact measurements of small differences in the isotopic ratios of two specimens,

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C-

. YUGOSLAVIA/Nuclear Physics - Installations and Instruments.
Methods of Measurement and Research.

Abs Jour : Ref Zhur Fizika, No 3, 1960, 5143

use was made of the method of successive inlet of the samples. The "memory" effect of the instrument to old, previously admitted samples, was investigated. It is shown that in the case of a small difference in the isotopic ratios of the specimen, it is enough to stop the apparatus for two minutes for evacuation between measurements. It is established that the isotopic ratio U^{238}/U^{235} in natural uranium is 138.2 ± 0.4. Ye.L. Frankevich

Card 2/2

VRSCAJ, V.; FURMAN, V.; DEKLEVA, J.

Nier's metallic mass spectrometer, p. 2. ELEKTROTEHNISKI VESTNIK. (Institut za elektrisko gospodarstvo, Fakulteta za elektrotehniko in Institut za elektrozveze) Ljubljana. Vol. 23, no. 11/12, 1955.

So. East European Accessions List Vol. 5, No. 9 September, 1956

VRSEAJ, S.

CZECHOSLOVAKIA/Magnetism - Experimental Methods of Magnetism F-1

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1126

Author : Vrseaj, Stane
Inst :
Title : Stabilization of Megnetic Fields with the Aid of Nuclear Resonance.

Orig Pub : Repts "J. Stefan" Inst., 1955, 2, 101-105

Abstract : Description of an electromagnet and a device that stabilizes the field with the aid of magnetic nuclear resonance. The magnet (weighing 500 kg) produces a field intensity of 2500 -- 5400 gauss. The diameter of the pull pieces is 12 cm, the gap is 4 cm, the inhomogeneity in the field is 0.03 gauss-cm^{-1}. The transducer employed is a tuned circuit fed from a quartz-stabilized oscillator. The control signals are worked out by a synchronous detector and regulate the magnetic field with the aid of two pairs of additional coils, fed by the plate current of the control

Card 1/2

VRSEC, Ernest, ing.

The proposal for the standard on roughness of superficies. Automatika 2 no.3:177-178 Ag '61.

(Yugoslavia--Standardization)

KASPAR, Jiri, dr.; VRSECKY, Arnost, inz.

Methods of establishing and using the technical and economic indexes of capital investment in the food industry. Prum potravin 13 no.6:286-289 Je '62.

1. Ministerstvo potravinarskeho prumyslu, Praha.

VRSECKY, A.

Evaluation of the economic efficiency of technical development and construction of buildings for bakeries under the investment plan. (To be contd.)
p. 45.

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho prumyslu a vykupu zemedelskych vyrobku a Sdruzeni mlynu a pekaren)
Praha, Czechoslovakia, Vol. 5, no. 1, Jan. 1959.

Monthly List of East European Accessions (EEAI), LC Vol. 9, no. 2,
Feb. 1960

Uncl.

VRSECKY, A.

Evaluation of the economic efficiency of techical development and construction of buildings for bakeries under the investment plan. (To be contd.) p. 94.

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho prumyslu a vykupu zemedelskych vyrobku a Sdruzeni mlynu a pekaren) Praha, Czechoslovakia, Vol. 5, no. 2, Feb. 1959.

Monthly List of East European Accessions (EEAI), LC Vol. 9, no. 2, Feb. 1960.

Uncl.

VRSECKY, F.

"Higher efficiency in breweries and malt kilns." P. 57.

KVASNY PRUMYSL. (Ministerstvo potravinarskeho prumyslu). Praha, Czechoslovakia, Vol. 5, No. 3, Mar. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

BENES, F., ing., CSc.; VRSEK, J., inz.; MAKARJEV, P., inz.;
OLEJ, J., inz.

Quality characteristics and structure of low-carbon steels in continuous casting. Hut listy 18 no. 12:850-858 D '63.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for all except Olej).
2. Svermove zeleziarne, Podbrezova (for Olej).

VRSEK, J., inz.; BENES, F., inz., CSc.; SZABO, A., inz.; STENO, J., inz.

Problems of continuous casting of low-carbon steels. Hut listy 18 no.11:773-779 N'63.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for Vrsek and Benes)
2. Svermove zeleziarne, Podbrezova (for Szabo and Steno).

MYSLIVEC, Theodor; CADEK, Josef; MANDL, Miroslav; VRSEK, Jaroslav; BRODSKY, I.; LUBOVSKY, M.

Effect of the quality of ceramic runners on the micropurity of steel used for making railway wagon tires. Part 2: Investigation on determining the origin of nonmetallic inclusions in steel by radioactive isotopes. Hut listy 16 no.2:94-102 F '61.

1. Vyzkumny ustav, Vitkovicke zelezarny Klementa Gottwalda, Ostrava (for Myslivec, Brodsky and Lubovsky). 2. Vyzkumny ustav hutnictvi zeleza, Praha (for Cadek, Mandl and Vrsek).

L 41478-65 EWT(d)/EWT(m)/EWP(w)/EWP(t)/EWP(c)/EWP(v)/EPR/T/EWP(k)/EWP(h)/EWP(l)/
EWA(c) Pf-4 JM
AM4048147 BOOK EXPLOITATION Z/

Vrsinsky, Bohumir (Engineer); Hlatny, Jiri (Engineer)

Handbook for aircraft mechanic; piston engines (Prirucka leteckeho motorare I; pistove motory) Prague, Nakl. dopravy a spoju, 1964. 379 p. illus., biblio. (fold. diagrs.) 2000 copies printed

TOPIC TAGS: aircraft engine, aircraft mechanic, aircraft piston engine

PURPOSE AND COVERAGE: The book is intended for mechanics and other shop personnel working in the production, testing, and operating of aircraft piston engines. The book describes the design, production, testing and operating of aircraft piston engines, and is intended to fill the gap between theoretical works on the one hand and work shop manuals on the other. The book is written at the level

TABLE OF CONTENTS [Abridged]:

Card 1/*

VRSOVSKY, E.

CZECH/3-59-10-11/37

AUTHOR: Lesák, J., Vršovský, E.

TITLE: Further Respond to the Gliding Section Challenge (Další ohlas na výzvu plachtařské sekce)

PERIODICAL: Křídla Vlasti, 1959, Nr 10, lower part of p 7 (CSR)

AUTHOR: Article deals with the contributions towards the 4th CPZ (National Glider Championship) fund drive by the Liberec Regional Aeroclub, Hodkovice Aviation Station and Podhořany Glider Tow Station.

Card 1/1

VRSOVSKY, Pavel

Experimental photoconductive pickup electron tubes sensitive to X-rays. Sbor vak elektrotech 4:145-155 '64.

1. Research Institute of Vacuum Electrical Engineering, Prague.

VRTAR, B.; PASPIŠIL, O.

Mycological testing of impregnative tar oils. p. 177.

DRVNA INDUSTRIJA. (Institut za drvno-industrijska istraživanja) Zagreb, Yugoslavia. Vol. 9, no. 11/12, Nov./Dec. 1958

Monthly list of East European Accessions (EEAI) LC, Vol, 8, no, 6, June 1959 Uncl.

Z/014/61/000/008/003/007
E192/E382

AUTHORS: Dušek, Dzeněk, Engineer and Vrtek, František, Engineer

TITLE: Influence of the Stray Magnetic Field of a Dynamic Loudspeaker on Ferrite Antennae

PERIODICAL: Sdělovací technika, 1961, No. 8, pp. 290 - 291

TEXT: The results of an experimental investigation of the influence of a constant magnetic field on ferrite antennae are reported. Also, the stray magnetic fields of three dynamic loudspeakers having a diaphragm with a diameter of 200 mm and magnets of ALNI (type ARO 511), ALNICO (type ARO 533) and an anisotropic oriented ferrite were measured. Several types of ferrite antennae made from LHB (lithium-zinc-ferrite) with initial permeability $\mu_i \sim 50$ and N1B (nickel-zinc-ferrite) and N2 (also nickel-zinc-ferrite) with $\mu_i \sim 200$ were used in the investigation. The changes of the permeability of the antenna coil due to the constant magnetic field were measured at a frequency of 1 Mc/s by means of a Q-meter. The ferrite

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Influence of the Stray ....

antenna with its coil was placed in the field of a magnetisation solenoid, where the field could be varied continuously between 0 and 100 Oe. The percentage permeability changes as a function of the applied magnetic field for the three types of ferrite are illustrated in Fig. 1. It is seen that the effect of the external magnetic field on the permeability is less pronounced in the antennae having higher initial permeability. The change of the permeability of the coil depends on the shape of the antenna, in particular, on the so-called demagnetisation factor N of the antenna, which is proportional to the ratio ℓ/d, where ℓ is the length of the antenna and d is its diameter. The actual magnetic field acting on the antenna is defined by:

$$H = \frac{H'}{1 + \frac{N}{4\pi}(\mu - 1)} \qquad (4)$$

where H' is the external magnetic field. If the data of Fig. 1 are re-plotted by taking N into account, it is found

Influence of the Stray ....

that the influence of the external field is the same for all three types of antenna. In practice, the source of the external field in a radio-receiver is the stray field of the dynamic loudspeaker. Such fields for the above three loudspeakers were measured by means of a permalloy probe containing two primary windings of 240 turns each and a secondary winding of 9 000 turns. The stray field for the ALNI magnet is illustrated in Fig. 5; this shows the lines of constant field in polar coordinates. The fields of the other two loudspeakers are similar in shape to that shown in Fig. 5.
There are 7 figures and 2 references: 1 Czech and 1 non-Czech.

Card 3/4

DUSEK, Zdenek, inz.; VRTEK, Frantisek, inz.

Influence of the magnetic dispersion field of dynamic loudspeakers on ferrite antennas. Sdel tech 9 no.8:290-291 Ag '61.

VRTEK, FRANTISEK

CZECHOSLOVAKIA

Authors: DUREK, Zdenek, [illegible] and VRTEK, Frantisek, Engr.

Title: "The Influence of the Magnetic Dispersion Field of Dynamic Loudspeakers on Ferrite Antennas."

Source: Prague, Sdelovaci technika, Vol IX, No 8, 1961, pp 290-291.

Abstract: The size of the loop antenna is determined by the size of the radio. The smaller the radio, the lesser the sensitivity of the loop antenna. A ferrite antenna concentrates a magnetic field from a large surface. It is a question of what influence the DC magnetic field of dynamic loudspeakers will have on a ferrite antenna, made of zinc-nickel ferrites with relative permeability up to 200. The authors actually measured a disperion field of three 200-millimeters diameter loudspeakers provided with magnets: Alni type AHO 51, Alnico type AHO 533, and oriented ferrite, by using permalloy probe up to a distance of 30 centimeters from the center of the loudspeakers. The primary winding of the probe is fed voltage from a generator at the frequency of one kilocycle. If the probe is in the zero magnetic field,

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CZECHOSLOVAKIA

Source: Prague, Sdelovací technika, Vol IX, No 8, 1961, pp 290-291.

the voltage on the secondary winding is also zero. If it enters any magnetic field, the balance will change. And from the difference in the flows it is possible to find the field intensity permeability of the ferrite antenna, calibrated directly in oersteds.

2/2

MALIK, J., ing. (Czechoslovakia); VRTEK, J.ing. (Czechoslovakia)

Some considerations on power demand of iron metallurgical plants. Ipari energia 5 no.3:56-57 M '64.

VRTEL, J.

"Technology of nuclear reactors" by P. Ageron, A. Bonaldi, H. Gauzit and T.Reis. Vol. 1: "Materials". Reviewed by J. Vrtel. Jaderna energie 6 no.3:108 Mr '60.

VRTEL, Jaroslav

Problem of materials in increasing the operational capacity of nuclear power plants. Jaderna energie 4 no.3:80-84 Mr '58.

1. Vyzkumny ustav materialu a technologie, Praha.

VRTEL, Jaroslav

Research on nuclear physics and engineering in Yugoslavia.
Jaderna energie 4 no.6:175 Je '58.

VRTEL, J.

Fuel elements, fuel-element cladding, and construction materials in a reactor. I. Fuel elements and fuel-element cladding. Jaroslav Pluhař and Jaroslav Vrtěl. *Jaderná energie* 5, 296-303(1959).—The following aspects are surveyed: types of materials in solid fuel elements (metal, alloys, ceramics, cermets) and their mech., thermal, corrosion, and nuclear properties; cladding and jacket materials (Al, Mg, Zr, Be, Nb, V, their alloys, and special steels); construction details of the fuel element (rods, plates, or tubes), including surface ribs for gas-cooled reactors; and possibilities of fuel elements based on Pu.
H. Newcombe

VRTEL, J.

Distr: 4E3c 2 cys/4E3d/4E2b(v)

Materials for reactor control rods. Jaroslav Vrtěl (State Research Inst. Materials and Technol., Prague). *Jaderná energie* 6, 9-15(1960).—The required properties for control-rod materials include a high neutron absorption cross section, low neutron scattering, high m.p., low wt. of substance needed to achieve a given absorption, high neutron absorption of the product of the nuclear reaction of the original material with neutrons, and low cost. The properties of Hf, Sm, Eu, Gd, Cd, alloys of Cd with Ag, In, or Sn, and B used as B_4C or in alloys, are given. Stainless steel contg. B was studied with regard to casting, malleability, mech. strength, and radiation stability. Neutron absorption by B^{10} produces He, which forms blisters in B-Ti alloy, but not in B steel. H. Newcombe

3 1-RS 4

VRTEL, J.

Materials used in the construction of pressure tank of the reactor of Experimental Nuclear Power Plant in Kahl, German Federal Republic. Jaderna energie 7 no.8:280-281 Ag '61.

VRTEL, J.

Effect of neutron radiation on beryllium. Jaderna energie 7 no.12: 415-416 D '61.

VOTTL, J.; PLUHAR, J.

Fuel elements, cladding and reactor-construction materials. I. Fuel elements and cladding. (To be cont'd.) p. 296.

JADERNA ENERGIE. (Ministerstvo energetiky)
Praha, Czeckosloviakia Vol. 5, no. [illegible], Sept. 1959

Monthly List of East European Accession, (EEAI), LC, Vol. 8, No. 12, Dec. 1959
Uncl.

VRTEL, J.; PLUHAR, J.

Fuel elements, fuel-element cladding and reactor-construction materials. II. Reactor-construction materials. (To be contd.) p. 331.

JADERNA ENERGIE. (Ministerstvo energetiky)
Praha, Czechoslovakia Vol. 5, no. 10, Oct. 1959

Monthly List of East European accession, (EEAI), LC, Vol. 8, No. 12, Dec. 1959
Uncl.

VRTEL, J., inz. CSc.

Micromechanism of the brittle fracture of steel. Strojirenstvi 14 no.12:929-936 D '64.

1. State Research Institu e of Material and Technology, Prague.

VRTEL, Milos

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: DVM

Affiliation: Department of Obstetrics and Gynecology, Veterinary Faculty (Porodnicko-gynekologicke katedra veterinarni fakulty) Brno; Head /prednosta/ Dr E. PRIBYL, Dr Sc

Source: Prague, Veterinarstvi, Vol 11, No 10, Oct 1961; pp 381-385

Data: "Sterility in Small Ruminants"

KUDLAC, Eduard
VRTEL, Milos

GPO 981643

VRTELI, G.

Production and consumption. Problems econ 1[illegible] no.9:3-14 S '62.

VRTELI, G., candidat in stiinte economice

Process of the expanded reproduction during the stage of the completion of building socialism. Probleme econ 14 no.7:16-26 Jl '61.

CZECHOSLOVAKIA/Virology - Human and Animals Viruses. E-3

Abs Jour : Ref Zhur - Biol., No 12, 1958, 52633

Author : Vrtiak, J., Frano, J., Belobrad, G.
Inst : -
Title : Isolation of Newcastle Disease Virus in Partridges and Its Properties.

Orig Pub : Veterin. casop., 1957, 6, No 5, 353-362

Abstract : No abstract.

Card 1/1

YUGOSLAVIA/Microbiology - General Microbiology. F

Abs Jour : Ref Zhur Biol., No 1, 1959, 618

Author : Vrtar, D.
Inst : -
Title : New Tannin Method for Obtaining Proteolytic Enzymes from Microorganisms.

Orig Pub : Glasnik biol. sek. Hrvatsko prirosodl. drustvo, 1953 (1955), Ser. 2B, 7, 374-375

Abstract : No abstract.

Card 1/1

VRTAR, B., LUETIC, F.

"Problems and experiments in the production of fumaric acid." p. 69. (KEMIJA U INDUSTRIJI, Vol. 2, no. 3, 1953, Zagreb.)

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress August, 1953, Uncl.

VRTAR, B., LUETIC, F.

"Problem and experiments of the production of fumaric acid." (To be contd.) p. 40.
(KEMIJA U INDUSTRIJI, Vol. 2, no. 2, 1953, Zagreb.)

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress August, 1953, Uncl.

VRTAR, Boris

BW

(2)

Chem Abs.
V.48 25 Jan 54

Microbiology

The microbicidal action and the phenol coefficient of furfuryl alcohol. Boris Vrtar (Inst. ind. istraživanja, Zagreb). *Kemija i Industrija* (Zagreb) 2, 208-9(1953). —Results obtained with *Aspergillus*, *Penicillium*, *Saccharomyces*, and *Staphylococcus* supported on nutritive substances, showed a pronounced microbicidal power of furfuryl alc. Its disinfecting power tested with *S. aureus* and *Escherichia coli* was 0.6-0.8 of that of phenol.
Nikola Plavšić

VRTARIC, I.

Can the choice of freight cars for export shipments be simplified? p. 260. (BEOGRAD, VOL 10, No. 7, July 1954.)

SO: Monthly Lists of East European Accessions. (EEAL, LC, Vol 4, No. 6, June 1955, Uncl.

VRTARIC, I.

Freer arrangement of cars will accelerate their turning. p. 336. (BEOGRAD, Vol. 10, No. 9, Sept. 1954.)

SO: Monthly List of East European Accessions. (EEAL, LC, Vol 4, No. 6, June 1955, Uncl.

VRTARIC, J

"Toward a uniform application of tariffs". (p. 41).
ZELEZNICE. (Jugoslovenske zeleznice) Beograd. Vol. 10, no. 2, Feb. 1954

SO: East European Accessions List. Vol. 3, No. 8, August 1954

L 21807-66 EWP(t)/EWA(h) IJP(c) JD

ACC NR: AP6011971 SOURCE CODE: CZ/0057/65/000/003/0133/0135

AUTHOR: Vrtek, Jaromir (Engineer); Sobek, Jan 73

ORG: NHKG, Ostrava B

TITLE: Experience in construction and during first years of operation of the oxygen plant at the Klement Gottwald Nova Hut Iron Works

SOURCE: Hutnik, no. 3, 1965, 133-135

TOPIC TAGS: furnace, krypton, xenon, oxygen

ABSTRACT: The oxygen is produced as technical-grade product, and used for increasing production rate in existing furnaces. A krypton concentrate plant is also in production, yielding a 40-80% Kr and Xe by volume. The oxygen plant is of Russian manufacture, and produces 4,700 m^3/h of 95% O_2, 280 m^3/h of 99.2% O_2, and 20 m^3/h of a Kr - Xe concentrate with 0.1 to 0.2% of Kr and Xe. The compressors are of Brown-Boveri manufacture; units have a 32,000 Nm^3/h capacity at 6.5 atp pressure. Start-up difficulties of the plant are discussed. Shortcomings of the design of the oxygen plant are described. Orig. art. has: 2 figures and 1 table. [JPRS]

SUB CODE: 13 / SUBM DATE: none

Steel Making

Card 1/1

L 20210-66 EPF(n)-2/EWP(v)/T/EWP(t)/EWP(k) IJP(c) JD/RM/GG

ACC NR: AP6010340 SOURCE CODE: CZ/0032/65/015/007/0512/0520

AUTHOR: Vrtel, J. (Engineer; Candidate of sciences); Svoboda, M. (Engineer); Sicha, F.

ORG: [Vrtel; Svoboda] State Research Institute of Material and Technology, Prague (Statni vyzkumny ustav materialu a technologie); [Sicha] Klement Gottwald Iron Works in Vitkovice, Ostrava (Viktovicke zelezarny Klementa Gottwalda)

TITLE: Fine-grained, niobium-alloyed weldable steel

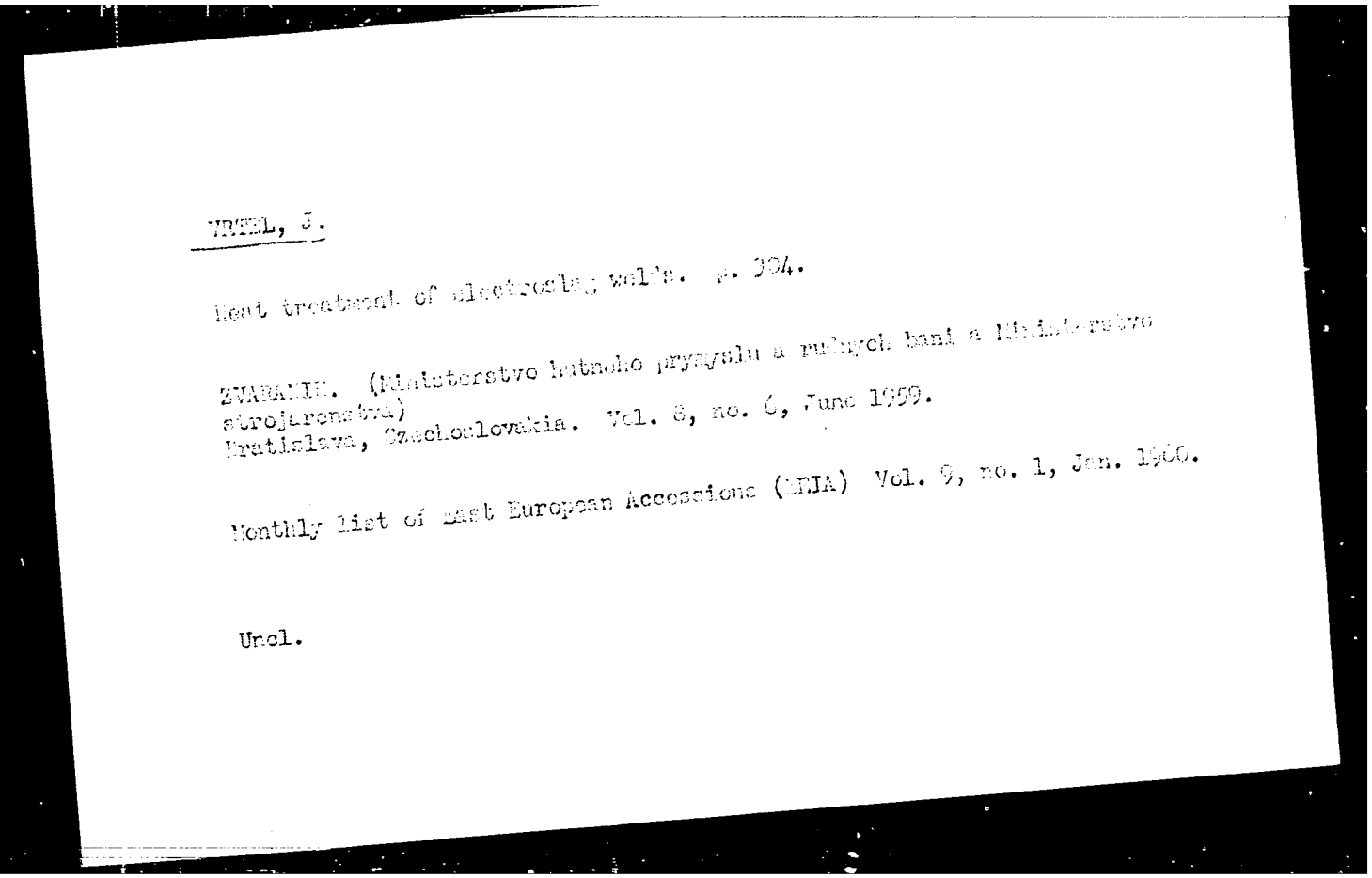
SOURCE: Strojirenstvi, v. 15, no. 7, 1965, 512-520

TOPIC TAGS: steel, niobium steel, solid mechanical property, metal property, weldability, niobium alloy, niobium, 13,032 niobium steel

ABSTRACT: The article reports detailed information on a new fine-grained niobium alloyed steel recently developed in Czechoslovakia and standardized as No. 13,032. The article briefly explains the effect of niobium on the mechanical properties of steel and compares the new steel with existing standard types employed for similar purposes. This paper was presented by J. Raiman, Engineer. Orig. art. has: 13 figures and 11 tables. [JPRS]

SUB CODE: 11, 13 / SUBM DATE: none / ORIG REF: 009 / OTH REF: 003

Card 1/1 UDC: 669.14.018.29;669.14.018.62;669.293



VRZAL, J.

Heat treatment of electrode wolds. p. 304.

ZVARANIE. (Ministerstvo hutného priemyslu a rudných baní a Ministerstvo strojárenstva) Bratislava, Czechoslovakia. Vol. 8, no. 6, June 1959.

Monthly list of East European Accessions (EEIA) Vol. 9, no. 1, Jan. 1960.

Uncl.

VRTEL, J.

Distr: 4E3c 2 cys/4E2b(v)/4E3d

Fuel elements, fuel element cladding, and construction materials in a reactor. II. Construction materials. Jaroslav Pluhař and Jaroslav Vrtěl (State Research Inst. Materials Technol., Prague). *Jaderná energie* 5, 331–5 (1959); cf. *CA* 54, 2026d.—Materials for control rods are discussed. Ag–In–Cd alloy has the advantage (over Cd) of a higher m.p. Hf has the disadvantage of high cost. B and B-steel are widely used despite the danger of deformation by the He produced. B_4C can be used either alone or dispersed in Al ("boral") and can be enriched with B^{10}.

Dispersion of Gd_2O_3 or Eu_2O_3 in steel is under development. Requirements for special steels for the manuf. of reactor pressure vessels are discussed; problems include embrittlement under radiation and the welding of austenitic steel 100 mm. thick. Materials for other uses, such as heat-exchanger pipes, are also discussed. H. Newcombe

5
1-RMR/S
1-RS
4

~~JAROSLAV~~ ~~VRTEL~~,

VRTEL, J.

Distr: 4E3c 2 cys/4E2b(v) 19

Material problems of pressure vessels for nuclear reactors. Jaroslav Vrtěl (State Research Inst. Materials and Technol., Prague). *Jaderná energie* 5, 397–404(1959).—The material for construction of pressure vessels, in order to be safe and not require repairs for 25 yr., must keep its max. mech. properties in all places under repeated mech. stress. The mech. stress is due not only to the pressure difference, but also to the heat produced by steady operation of the reactor, by sudden stopping or starting, and by absorption of radiation in the walls. The use of thin walls decreases the heat stress, but requires high mech. strength. In order to control embrittlement, the transition temp. must be low. The degree of radiation damage depends on neutron flux, neutron energies, time, and temp. Higher temp. promotes recovery. Limit of effective damage is 10^{19} n/sq. cm. The steel should be fine-grained with low tendency toward aging. To decrease induced radioactivity, the Co and Mn content should be low, but if this is impractical, there should be a shield of B steel between the wall and the reactor. H. Nemecmbc

3
1-RS
3

CAR

05175
Z/034/60/000/012/004/015
E073/E535

21310

AUTHOR: Vrtěl, Jaroslav, Engineer

TITLE: Steels and Cast Irons with High Boron Contents

PERIODICAL: Hutnické listy, 1960, No.12, pp.945-950

TEXT: Work of various authors, including work presented at the Second International Conference on Peaceful Utilization of Atomic Energy in Geneva, related mainly to overcoming technological difficulties in producing formed ferritic and austenitic steels with as high a boron content as possible and particularly with achieving good malleability of such alloys. Less attention was paid to the study of their structural conditions, which are of interest also outside the field of nuclear engineering. Therefore, the author carried out detailed investigations in 1958 at SVÚMT for the purpose of getting to know the structure of boron containing steels and cast irons (Refs. 1,2). The boron for alloying was produced by reducing boron compounds or ferroboron was used for alloying. Speight (Ref.9) investigated the possibility of alloying steel with up to 0.003% B. His results were verified in Czechoslovakia by the tests of Skála and Tlustá (Ref.10) who achieved alloying with boron up to 0.4%. The authors used on the one hand non-aqueous

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85175
Z/034/60/000/012/004/015
E073/E535

Steels and Cast Irons with High Boron Contents

remolten borax and on the other hand boron oxide. The chemical composition of the melt during the reaction is given for a typical case of cast iron in Table 1. The reaction proceeded between 1350 and 1450°C, the weight ratio of the quantity of borax to the quantity of metal was 1:10. After 30 min the boron content was 0.17%, after 60 min it was 1.46%. The time dependence of saturation of the metal with boron during reduction of boron compounds is graphed in Fig.1 for steel with 0.07 and 0.19% C and for cast iron with 3.75 and 1.90% C, both in the case of using borax and in using B_2O_3 for the reaction. For obtaining higher boron contents, ferroboron was mainly used, as a result of which boron contents of up to 5.54% were achieved. The thus produced materials were investigated to determine their mechanical properties, structural composition and the influence of heat treatment. Particular attention was paid to studying the phase compositions of such cast irons and steels. In the cast irons the boron enters into the cementite or forms the carbide $Fe_{23}(C,B)_6$; depending on the B:C ratio in steel the stable boride Fe_2B occurs and the authors did not succeed to dissolve it in the α-iron. As a result of this, the

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85175

Z/034/60/000/012/004/015
E073/E535

Steels and Cast Irons with High Boron Contents

improvement of the properties of steel and cast iron with over 1% B by heat treatment is very limited. The influence of the heat treatment is practically limited to globularizing the boride Fe_2B of the borite eutectic. The properties of the Fe-B alloys are determined by the chemical composition and particularly by the casting temperature and the speed of cooling etc. which influence the process of crystallization. In boron steels not containing other elements, the isolate consisted of Fe_2B; if a strong carbide forming element, for instance Ti, was added, the appropriate carbide could be detected in addition to Fe_2B. Additions of Cr and Al (up to 5.8% Cr and 3.5% Al) did not bring about the formation of a new phase; the Cr entered into the Fe_2B lattice increasing its lattice parameter, whilst Al up to 3.5% is dissolved in the basic ferritic mass. As regards the influence of heat treatment, extensive tests have shown that the properties of boron containing steels cannot be decisively influenced by quenching and tempering, even if additions are chosen which increase considerably the hardenability (Cr for instance). There are 11 Figures, 5 tables and 16 references: 6 Czech, 3 German, 7 English.

ASSOCIATION: SVÚMT, Praha (SVÚMT, Prague)
SUBMITTED: August 12, 1960
Card 3/3

VRTEL, Jaroslav, inz. CSc.; RYSAVA, Marie, CSc.

Contribution to the study of secondary hardening of boiler steel with addition of molybdenum (Czechoslovak Standard 15 223). Hut listy 20 no.1:31-36 Ja '65.

1. State Research Institute of Materials and Technology, Prague.

VRTEL, J.

VRTEL, J. Effect of nitrogen on the quality of welded joints. p. 16.

Vol. 3, No. 1/2, 1954
SVARACSKY SBORNIK
TECHNOLOGY
Bratislava, Czechoslovakia

So: East European Accessions, Vol. 5, No. 5, May 1956

VRTEL, J.

Radioisotopes for controlling welded seams on pipelines. p. 760.
STROJIRENSTVI. Vol. 4, no. 10, Oct. 1954.

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 5, No. 6, June 1956 Uncl.

CZ/38-60-1-5/24

AUTHOR: Vrtěl, Jaroslav

TITLE: Materials for Reactor Control Devices

PERIODICAL: Jaderná Energie, 1960, No. 1, pp. 9 - 15

TEXT: The author analyzes the qualities of materials used in the production of reactor control devices, regarding their effectiveness for this purpose. He specializes on various types of rods, such as control rods, compensator rods and emergency rods, which are designed to control and change the output of nuclear reactors and maintain the chain reaction. He also deals with the requirements these materials must meet and with the most important absorption materials, such as hafnium, rare earth elements, cadmium and boron. There are 15 diagrams, 4 tables, 9 photos and 10 references, 8 of which are American, 1 British and 1 Czechoslovakian.

ASSOCIATION: Státní výzkumný ústav materiálů a technologie, Praha (State Experimental Institute for Materials and Technology, Prague)

Card 1/1

S/137/62/000/011/032/045
A006/A101

AUTHOR: Vrtěl, Jaroslav

TITLE: Steels and cast-irons containing over 1% boron for protecting and regulating purposes

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 88, abstract 11I591 ("Material sb. SVUMT, 1959", Praha, 1960, 115 - 164, Czech; summaries in Russian, German and English)

TEXT: The author analyzed various methods of alloying steels and cast-irons with boron, in particular, by reduction of boron compounds or introducing Fe-B. The technical conditions are determined for the production of cast and forged steel, containing up to 5% B, and the physical and mechanical properties of steel at room and high temperatures are given, depending upon the B content. It was established that the mechanical properties of steel containing ~2.5% B and 0.1% C can not be improved by heat treatment. The author presents the optimum chemical composition and heat treatment conditions of steel used for the casting of heat protection units for reactors.

V. Srednogorska

[Abstracter's note: Complete translation]

Card 1/1

S/137/62/000/011/029/045
A006/A101

AUTHORS: Svoboda, Miroslav, Vrtěl, Jaroslav, Šicha, František

TITLE: Low-alloy weldable ferrite-perlitic steel with high toughness

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 74 abstract 11I479P, Czechoslovakian Patent no. 101219 of October 15, 1961)

TEXT: The composition is given for a steel grade with high a_k at temperatures to - 100°C in delivery state which is suitable for the manufacture of large-size parts. The steel contains in %: C 0.10 - 0.25, Ni 0.3 - 1.0 Al (in the solid solution) 0.02 - 0.20 Si $\leq$ 0.4, Mn 0.8 - 1.5. The steel may also contain carbide-forming elements, such as: Nb, Ta, Mo, V, Ti and Zr, separately or in combinations, up to 0.4%. Steel containing (in%) C 0.11 Mn 0.94 Si 0.28 Ni 0.65 Al (in the solid solution) 0.1 Nb 0.09 shows at - 70°C a_k as high as 6 kgm/cm^2. The temperature of transition to brittle state is - 100°C in delivery state, and - 70°C after deformation aging.

M. Shapiro

[Abstracter's note: Complete translation]

Card 1/1

41987
Z/506/60/000/000/003/004
I037/I237

21 2400

AUTHOR: Vrtěl, Jaroslav, Engineer, Candidate for Technical Sciences

TITLE: Steels containing Boron for nuclear technique

SOURCE: Prague. Statni vyzkumny ustav materialu a technologie. Materialovy sbornik, 1959. Prague, 1960, 115-164

TEXT: Results of experiments with steels and cast irons containing 1-5% Boron are reported. These steels are required for shielding and control purposes in nuclear reactors, especially where Cd^{113} cannot be used, as B has a large cross section for thermal neutrons. Another use of the B - steels is for heat screening between the active zone and the external coat. For the latter use high corrosion resistance and stability is required. The B - steels can be prepared a) Up to 1.5% B by reduction of B - compounds by aluminium, the reduced B being incorporated into the alloy. b) Up to 5% B by addition of ferobor.
The wrought steels without further additions have mechanical proper-

Card 1/4

Z/506/60/000/000/003/004
I037/I237

Steels containing Boron...

ties, especially ductility and construction, superior to those achieved by Middleham. Addition of chromium improved strength but reduced ductility. However it considerably improved the mechanical properties at 300°C.
The notch-bar test of toughness of steels containing more than 1% B yields low values (also due to the presence of Al in the alloy). The decrease in toughness depends also on the carbon content. Increase in carbon content enhances the effect of Al on decreasing the toughness. In any case, the Al content should be kept below 3.5%.
In steels containing more than 2.5% B and more than 0.1% C no transformation occurs that would substantially improve the mechanical properties of the steel. It is advantageous to heat treat the boron containing steel castings at 920°C - 950°C for one hour and to anneal them at 680°C for 10 hours. This procedure improves the homogeneity of the steel.

Card 2/4

Z/506/60/000/000/003/004
I037/I237

Steels containing Boron...

Metallographic, chemical and X-ray studies, as well as thermal analysis on steels with varying B content show that the present borides do not affect the metallic matrix. The properties of the B - steels are determined by the chemical composition and by technological factors (casting temperature, cooling rate affecting the crystal size). Carbon enters into reaction with B and Fe forming complex Fero-Boro-carbides of the type $Fe_{23}(C,B)_6$ which accompany iron borides alloyed with Al and Cr. Al and Cr also take part in alloying of solid solution of α iron (at low carbon content). Thus chromium fulfills a multiple function. It improves the mechanical properties of B - steels at elevated temperatures, it stabilizes the Boron containing components, and increases the steel resistance towards atmospheric corrosion. 3%-3.5% proved to be the optimal chromium content. Consequently, the steel for heat protection of reactors had the following composition: C 0.1%, B = 2.0 2.5%, Al = 2.0-2.5%, Cr = 3.0 3.5%, Ti = 1-1.2%.

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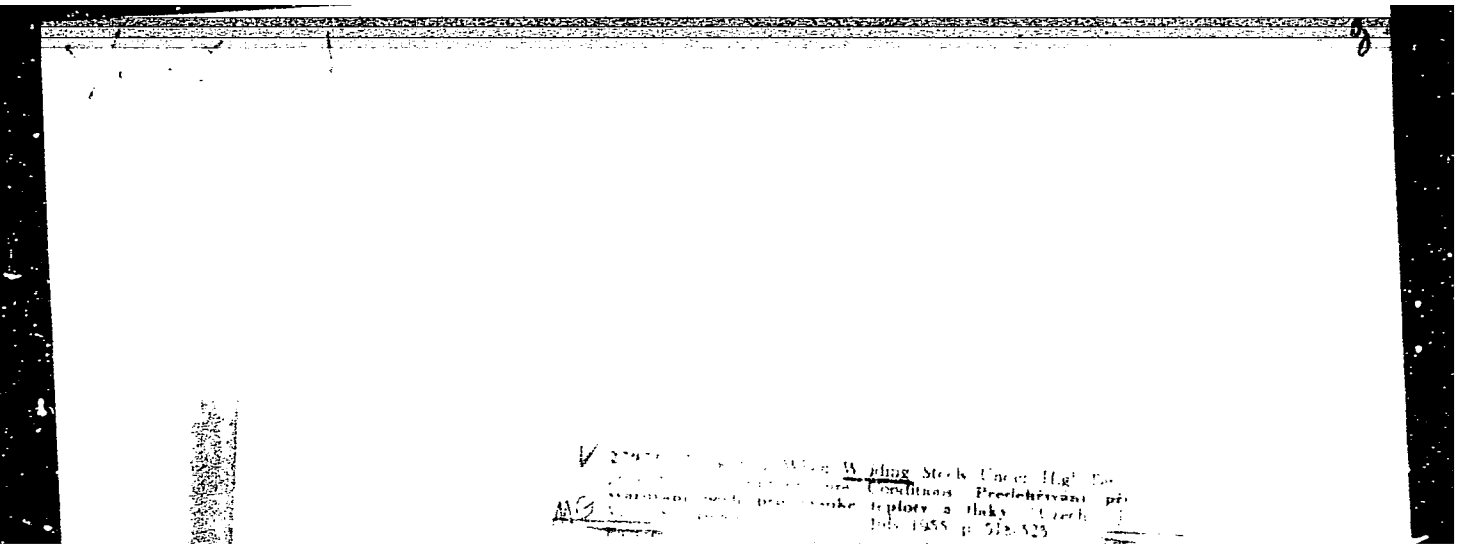
Z/506/60/000/000/003/004
I037/I237

Steels containing Boron...

Titanium (sometimes tungsten) was added for C and N binding to avoid Borocarbide and Boronitrite formation. Si is also frequently in amounts of between 1% and 5%. It improves stability and hardness as well.
The complex phenomenon occurring in the steel at 500-700°C should be further investigated. The radiation effect on the different types of B-steel also required further consideration. There are 36 figures, 19 tables and 28 references. English language references include: Middleham, T.H., Ruit, S.R., Colbeck, E.W.: J. Brit. Nucl. En. Conf. 3 (1958) 116-124; J. Iron & Steel Inst. 184 (1957) 1-14; Iron & Steel 30 (1957) 526-534. Goldhoff, R.M., Spretnak, J.W.: Distribution of B in gamma Iron Grans.: Transact. AIME 209 (1957), 1278-83.

Card 4/4



ACCESSION NR: AP5019910 CS/0032/64/014/012/09[illegible]

AUTHOR: Vrtel, J. (Engineer, Candidate of sciences)

TITLE: Micromechanism of brittle fracture of steel machine parts

SOURCE: Strojirenstvi, v. 14, no. 12, 1964, 929-936

TOPIC TAGS: metal brittleness, metal fracture, metal deformation, steel, mechanical engineering

Abstract (Author's English summary, modified): The article presents a comprehensive survey of theories explaining the mechanism of deformations and displacements in the structure of metals, occurring there on an atomic scale. The micromechanism of brittle fracture is an important factor because it initiates macroscopic cracks which may eventually cause failures of large machine parts and entire structures. Though the problems of brittle fracture are in the foreground in many research institutes, the vital stage of the process, that is, the initiation of the microscopic cracks, is not clear. In this respect the theories discussed in the article have a common weak [illegible] formulas, 11 graphs, and 3 tables.

ACCESSION NR: AP3019910

ASSOCIATION: S/UMT, Prague

SUBMITTED: 00

NO REF SOV: 004

ENCL: 00

OTHER: 016

SUB CODE: IE, AS

JPRS

L 3764-66 EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c)

ACC NR: AP5027863 CZ/0034/65/000/001/0031/0036

AUTHOR: Vrtel, Jaroslav (Engineer, Candidate of sciences); Rysava, Marie (Candidate of sciences)

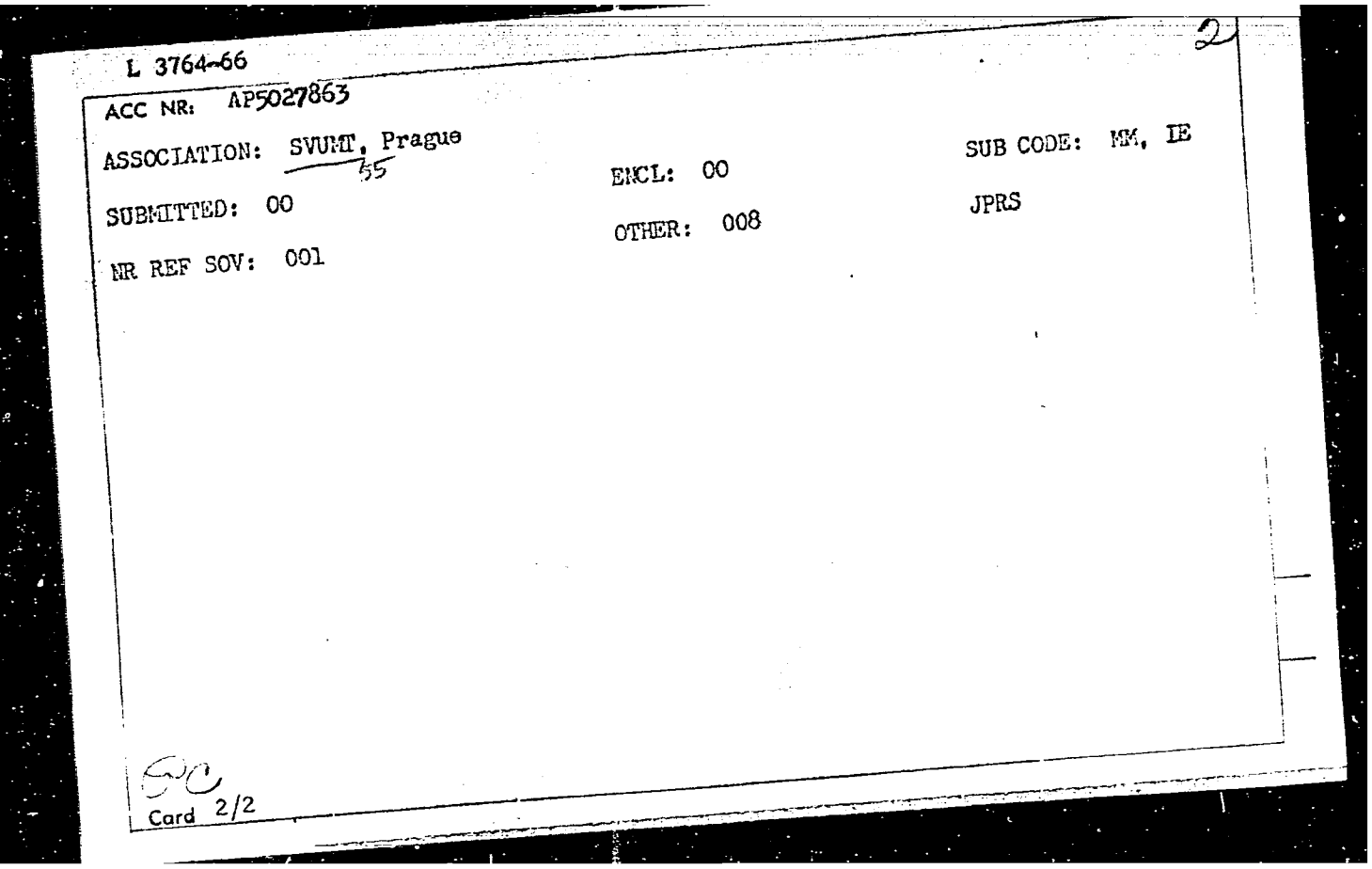
TITLE: Contribution to the study of secondary precipitation hardening of molybdenum containing boiler plate steel CSN 15223

SOURCE: Hutnicke listy, no. 1, 1965, 31-36

TOPIC TAGS: steel, precipitation hardening, molybdenum steel, electron microscopy, fabricated structural metal, toughness/CSN 15223 steel

ABSTRACT: [Authors' English summary]: CSN steel 15223 containing Mn and Mo has the same composition as U.S. steel A 302 B; electron microscopy technique was used in investigating factors that cause low notch toughness of thick plates made of this steel. It was found that hardening occurs in the steel during tempering, and is due to the precipitation of Mo_2C carbide. Maximum hardening with considerable reduction in notch toughness appears at 600°C after 14 hours of tempering. Details of the microscopic examination of Mo_2C are presented, and the extent of its precipitation during heat treatment is discussed. Orig. art. has: 4 tables, 4 graphs, 14 figures.

Card 1/2



L 3764-66

ACC NR: AP5027863

ASSOCIATION: SVUMT, Prague
35

SUBMITTED: 00

NR REF SOV: 001

ENCL: 00

OTHER: 008

SUB CODE: MM, IE

JPRS

Card 2/2

CZECHOSLOVAKIA

KUDLAC, E.; VRTEL, M.; Veterinary Faculty, Chair of Gynecology, College of Agriculture (VSZ, Veterinarni Fakulta, Katedra Porodnicko-gynekologicka), Brno.

"Comparative Study of the Caesarian Section in Cattle Carried out on Standing and Lying Animals from the Left Side."

Prague, Veterinarni Medicina, Vol 11, No 7, Jul 66, pp 420 - 430

Abstract [Authors' English summary modified]: Evaluation of 389 Caesarian sections is made; the method of paramedial section was used on 250 lying animals, and the section in the left flank on 139 standing animals. The main indications for the Cesarian section were narrow delivery canals, large fetus, and inadequately opened cervix uteri. Better results from the surgical stand point were obtained in operations in the standing position. The viability of the calves is a function of the time elapsed between the onset of the delivery and the operation. 194 cows were used in further breeding; 68.56% were fertile. 4 Tables, 20 Western, 5 Czech, 1 East German reference. (Manuscript received 11 Feb 66).
1/1

43542
S/196/62/000/022/007/007
E194/E155

9.2120

AUTHORS: Hanus, Jan, and Vrtel, Leo

TITLE: Cascade current transformer

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.22, 1962, 28-29, abstract 22 I 149 P. (Czech. pat. cl. 21d^2, 53/01, no.99246, April 15, 1961)

TEXT: The bushing-type current transformer, the construction of which is patented, withstands short-circuit currents very well. It is a two-stage cascade. The construction is similar to that of a pedestal-type current transformer, which is simpler, because in it the short-circuit current passes only through the primary winding of the first stage, whereas in that under consideration the current must also pass through the second stage. Only the second stage is insulated for high voltage. The first stage has low-voltage insulation, so that its core (made of toroidal strip) has a very short mean magnetic path length and consequently low magnetising ampere turns. For a given accuracy this makes it possible to use a small rated number of ampere-turns in the first stage. The primary winding (2) and the secondary winding (3) of

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Cascade current transformer

the first stage (see sketch) are uniformly distributed over the first core. The small number of uniformly-distributed circular turns and the small dimensions of the core give the first stage rigidity against short-circuit currents. The second stage has two primary windings (5), (6) and secondary winding (7). Its core (4) may be toroidal, or even rectangular of core or shell-type. The primary winding (5) is a continuation of winding (2) of the first stage, and short-circuit current also passes through it. For rigidity, it should have the least possible number of turns, preferably one. The conductor section of windings (2) and (5) should be designed to ensure thermal stability. A further second stage primary winding (6) is connected to the second winding of the first stage (3). The considerable burden which the second stage represents, and also the small section of the primary stage core, causes this core to saturate when the current is heavy. Therefore, the current in windings (3), (6) and (7) is considerably less than in windings (2) and (5) (it does not exceed 50 times the rated current). The section of conductors for windings (3), (6) and (7) should be selected accordingly. Windings (5) and (6) should be

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Cascade current transformer

wound in such a way that within the core currents in them are in the same direction. The number of turns in winding (7) is based on the condition $I_2N_2 = I_1N_1 + I_1^1 N_1^1$, where I_1, I_1^i and I_2 are the currents in windings 5, 6 and 7, and N_1, N_1^1 and N_2 are the number of turns in these windings. Since windings 5, 6 and 7 need only normal rigidity against short-circuit currents, the second stage may consist of ordinary bushing-type current transformers with porcelain insulators (with somewhat modified winding data). To these current transformers is fitted a first stage the data of which depend on the rated current, the rigidity class and the short-circuit current. Possible variants are: 1) winding (5) may have one or several turns; 2) the first stage may be made as an auto-transformer with a transformation ratio of 1:1; 3) to reduce the error, the first stage may be made with pre-magnetisation - the first stage core is divided into two unequal parts, the smaller having a premagnetising winding supplied from the terminals of an impedance connected in series with winding (6);

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Cascade current transformer

S/196/62/000/022/007/007
E194/E155

4) if the second stage core is of the shell type it is not uniformly magnetised because winding (5) passes through only one of the two windows of the core; to avoid this an equalising winding is wound on the adjacent part of the core and connected in series with winding (7); the number of turns in this equalising winding, N_2^1, is selected according to the condition $I_1 = I_2 N_2^1$ (supposing that winding (5) has one turn). The advantages of the construction are: high rigidity; no need for ferro-nickel alloys as in single-stage construction; the possibility of using standard multi-turn bushing transformers for the main part of the current transformer.

[Abstractor's note: Complete translation.]

Card 4/5

VRTELI, Gr., candidat in stiinte economice

Expanded reproduction of skilled labor. Probleme econ 16 no.7:14-25 Jl '63.

SVEDIROHOVA, Milada; TRKAN, Miroslav; VRTELOVA, Hana

Selecting and testing most suitable varieties of brewing barley in Czechoslovakia. Kvasny prum 9 no.5:122-124 My '63.

1. Vyzkumny ustav pivovarsky a sladarsky, Praha, pracoviste Brno.

CZECHOSLOVAKIA

POPLUHAR, L.; VRTIAK, J.; Chair of Infectious Diseases, Veterinary Faculty, College of Agriculture (VSP, Vetr. Fakulta, Katedra Infekcnich Chorob), Kosice.

"Latent Forms of Tuberculosis and Anergic Animals as a Source of Tuberculous Infection in Cattle."

Prague, Veterinarni Medicina, Vol 11, No 8, Aug 66, pp 523 - 528

Abstract [Authors' English summary modified]: Reexamination of 517 head of cattle originating from tuberculous environment was carried out; in 141 animals anergic conditions were found after a dose of 500, 5000, and 10000 TU. In 2 of these animals generalized form of tuberculosis was found by dissection, and in 3 calcified tuberculous changes were found. 96 other samples were taken; in 2 tuberculous organisms were found by cultivation, and in 4 by biological tests. The tuberculin test in cattle is highly reliable, but does not exclude the possibility of keeping a tuberculous animal in the herd; this may cause a new outbreak of tuberculosis. 1 Table, 15 Western, 4 Czech, 1 Russian, 1 Indian, 1 Hungarian, 1 Polish reference. (Manuscript received 10 May 65).

1/1

VRTILEK, VLADIMIR

30

VRTFLKA, V.

"Once Again About the Lunak", P. 616, (VRIELA VLASTI, Vol. 2, No. 26, December 1953, Praha, Czech.)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.

VRTELKA, V.

"Some Information about National Gliding Competitions," P. 616, (VRTELKA VLASTI, Vol. 2, No. 26, December 1953, Praha, Czech.)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.

POSPISIL, R.; POLONY, R.; MITTERMAYER, T.; VRTIAK, J.; za technickej spoluprace M.Cechlovskej.

Neorickettsiosis as a new anthropozoonosis and its relation to bronchopneumonia in calves. Cesk.epidem.mikrob.imun.10 no.2: 98-101 Mr '61.

1. Ustav hygieny lek.fak.Univ.P.J.Safarika v Kosiciach; Statny ved.veterinarny ustav v Kosiciach; Infekcne odd. KUNZ v Kosiciach; Klinika pre choroby infekcne vet.fak. v Kosiciach.
(BRONCHOPNEUMONIA veterinary)
(MIYAGAWANELLA infect)

Veterinary Medicine

CZECHOSLOVAKIA

GDOVINOVA, A.; POLONY, R.; VRTIAK, J.; ZAVADOVA, J.; Department of Infectious Diseases, Veterinary Faculty, College of Agriculture (VSP, Veterinarska Fakulta, Katedra Infekcnych Chorob), Kosice.

"Use of the Color Test in Laboratory Diagnosis of the Classical Fowl Plague."

Prague, Veterinarni Medicina, Vol 12, No 1, Jan 67, pp 19 - 25

Abstract [Authors' English summary modified]: The optimum cell concentration with the highest activity during a 4-7 day observation period was 1-2 x 10^6 of chicken embryonal cells. Best results were obtained in Earl's medium. Most distinctive color changes were obtained with a 10% concentration of the serum. A comparison of the results of the color test with titration in the stationary KEB test tube cultures showed practically the same values by both methods. The differences were within a single order of magnitude. 2 Tables, 8 Western, 5 Czech references. (Manuscript received 2 Jul 66).

1/1

VRTIAK, ZAPLETAL

SLOVAKIA(CZECH?)/Microbiology - Medical and Veterinary Microbiology F-4

Abs Jour : Referat Zhurn - Biol., No 16, 25 Aug 1957, 68665

Author : Vrtiak, Zapletal

Inst :

Title : Trichophyton faviforme discoides-- Producer of Ringworm in Large Horned Cattle.

Orig Pub : Veterin. Casop., 1956, 5, No 3, 204-228

Abstract : No abstract.

Card 1/1 - 80 -

SEDLACKOVA,E.; VRTICKA,K.

Speech development in children with congenital defects of the palate. Cesk. pediat. 19 no.3:239-242 Mr'64

1. Foniatricka laborator fakulty vseobecneho lekarstvi KU v Praze; reditel: prof.dr. M.Seeman, DrSc.

VRTICKA, Karel

Perichondritis with consecutive necrosis of the cartilage as a late sequel of radiation injury of the larynx. Cesk.otolar. 9 no.2:120-122 '60.

1. Otolaryngologicka klinika VLA v Hradci Kralove, prednosta prof.dr. Jan Hybasek.
(RADIATION INJURY)
(LARYNGEAL CARTILAGE pathol.)
(LARYNX radiation eff.)

KLOBEC, K., Plk., MUDr.; KOVAR, M., mjr., MUDr.; RUZNAR, St., kpt., MUDr.; VRTILEK, M., kpt., MUDr.

Various data on so called sinobronchitis. Cas. lek. cesk. 95 no. 37:1008-1015 14 Sept 56.

1. Posadkova nemocnice Olomouc.
(SINUSITIS, compl.
bronchial dis., statist. (Cz))
(BRONCHI, dis.
with sinusitis, statist. (Cz))

VRTILEK, VLADIMÍR

(1)

Reaction of serum based on its coagulation by sulfosalicylic acid II Healthy persons Vladimír Morávek and Vladimír Vrtílek *Publs. fac. sci. univ. Masaryk* 362, No. 4 [1952]. Turbidity is produced in dild serum by an alkali. The different turbidities at different pH values are plotted graphically. The serums of pregnant women show a different shape curve than the serums of normal persons. III. Concentration of serum and influence of ions. Vladimír Morávek, Vladimír Vrtílek, and Eva Moravková. *Ibid.* 17–30. Here, as in the previous article, the turbidity of the serums is measured at different pH values by using 0.5 ml. of soln. consisting of 5 ml. 0.1 *N* HCl, 1 ml. of 5% sulfosalicylic acid soln., and 0.5 ml. of a 0.5% gum arabic soln. To this 0.5 ml. serum is added, and the vol. made up to 16.5 ml. with water. Now 0.1 *N* KOH is added, and the measurements are made after 2 min. KCl, LiCl, and $CaCl_2$ influence the result by their effect on the final pH. Neutral salts have essentially the same effect as dilg. the serum. IV. Influence of neutral salts and preservation of the serum. *Ibid.* 37–48.—LiOH is used for gradual neutralization, using the same procedure as in the previous article. LiCl, KCl, $CaCl_2$, $SrCl_2$, and glucose are used alternatively and their effect upon the shape of the curve noted. With increasing pH every addn. of the salt causes the curve to move upwards in its ascending part of the curve. The optimum of turbidity decreases in the order Sr > Ca > K > Li. Sugars have no effect on the position of the curve. Bivalent cations show a higher reactivity than univalent cations and thus aid in distinguishing qualitatively blood serums. Blood serums stored sterile at 2° to 25° for 48 hrs. show no effect. Lyophilization and inactivation interfere with the buffer system of the serum and change the curve in its ascending branch. O. E. Lobstein

(2)

VRTILEK, V.

Effect of hunger and thirst on biosynthesis of cholesterin in mice.
Coll Cz chem 26 no.6:1573-1581 Je '61.

1. Abteilung fur allgemeine und klinische Biochemie, Pharmazeutische Fakultat der Universitat, Brno.

(Mice) (Cholesterol)

VRTILEK, Vladimir; SLAMOVA, Ludmila; APPELT, Jiri

Changes in the cholesterol content of the body in mice after alloxan-induced diabetes. Scr. med. fac. med. Brunensis 36 no.1/2:55-60 '63.

1. Katedra lekarske chemie lekarske fakulty University J.E. Purkyne v Brne Vedouci prof. dr. Oktavian Wagner Katedra biochemie a mikrobiologie farmaceuticke fakulty University Komenskeho v Bratislave Vedouci prof. DrMr. Antonin Jindra.
(ALLOXAN DIABETES) (CHOLESTEROL)

VRTILEK, Vladimir; SAMKOVA, Milada

Modification of the method of Dische-Orlowski for determination of the lactic acid in the blood. Scr. med. fac. med. Brunen. 35 no.1/2: 59-66 '62.

1. Oddeleni vseobecne a klinicke biochemie farmaceuticke fakulty a Ustav lekarske chemie lekarske fakulty university J.E.Purkyne v Brne Vedouci prof. dr. O. Wagner.

(LACTATES blood)

VRTILEK, V.

VRTILEK V.

Solanaceae: Datura Stramonium. Cas. cesk. lek. 63:13 15 July 50
p. 149-50

NAI

CML 19, 5, Nov. 50

Endocrinology

CZECHOSLOVAKIA UDC 616.633(:577.15.65)-074

VRTILEK, V.; Department of Medical Chemistry, Medical Faculty, J.E. Purkyne University (Katedra Lekarske Chemie Lek. Fak. UJEP), Brno, Head (Vedouci Katedry) Docent Dr J. SLAVIK

"Determination of Estrogens. I. Normal and Pathological Estrogen Levels in Urine."

Prague, Casopis Lekaru Ceskych, Vol 106, No 9, 3 Mar 67, pp 243 - 246

Abstract [Author's English summary modified]: A spectrophotometric method for the determination of estrogens is described. Accuracy and reproducibility of the method, and examples of normal and pathological levels of the estrogens in urine are discussed. 4 Tables, 10 Western, 4 Czech references. (Manuscript received Mar 66).

1/1

SABACKY, Jaroslav; VRTILEK, Vladimir

Estrogens in childhood and in a case of congenital adrenogenital syndrome. Cesk.pediat.15 no.11:989-997 N'60.

1. I. detska klinika v Brne, prednosta prof.dr. Brunecky. Ustav klinickych vysetrovacich metod farmac. fakulty v Brne.
(ESTROGENS urine)
(ADRENOGENITAL SYNDROME urine)

VRTILKOVA, V.; KALVODA, R.

Use of oscillographic polarography in quantitative analysis. Pt.21. Chem zvesti 18 no.5/6:410-413 '64.

1. Institute of Polarography, Czechoslovak Academy of Sciences, Prague.

VRTIPRASKI, Lenka, Dr.

Present state of medical care for school children in Serbia. Bibl. Hig.inst.Srbije no.5:103-115 '54.

1. Institut za zdravstvenu zastitu narodnog podmlatka NR Srbije.
(SCHOOLS,
med. serv. in Yugosl.)
(CHILD WELFARE,
med. care for school child. in Yugosl.)

GUCCLOVA, Y.; VRTIS, J.; ANTAL, J.

Effect of muscular work on blood coagulation changes in the dog. Activ. nerv. sup. 4 no.2:174-175 '62.

1. Fyziologicky ustav Lekarskej fakulty University Komenskeho v Bratislave.

(EXERTION physiol) (BLOOD COAGULATION physiol)

[redacted]

CZECHOSLOVAKIA / Microbiology. Antibiosis and Symbiosis. Antibiotics. F

Abs Jour : Ref. Zhur - Biol., No. 21, 1958, No 95057

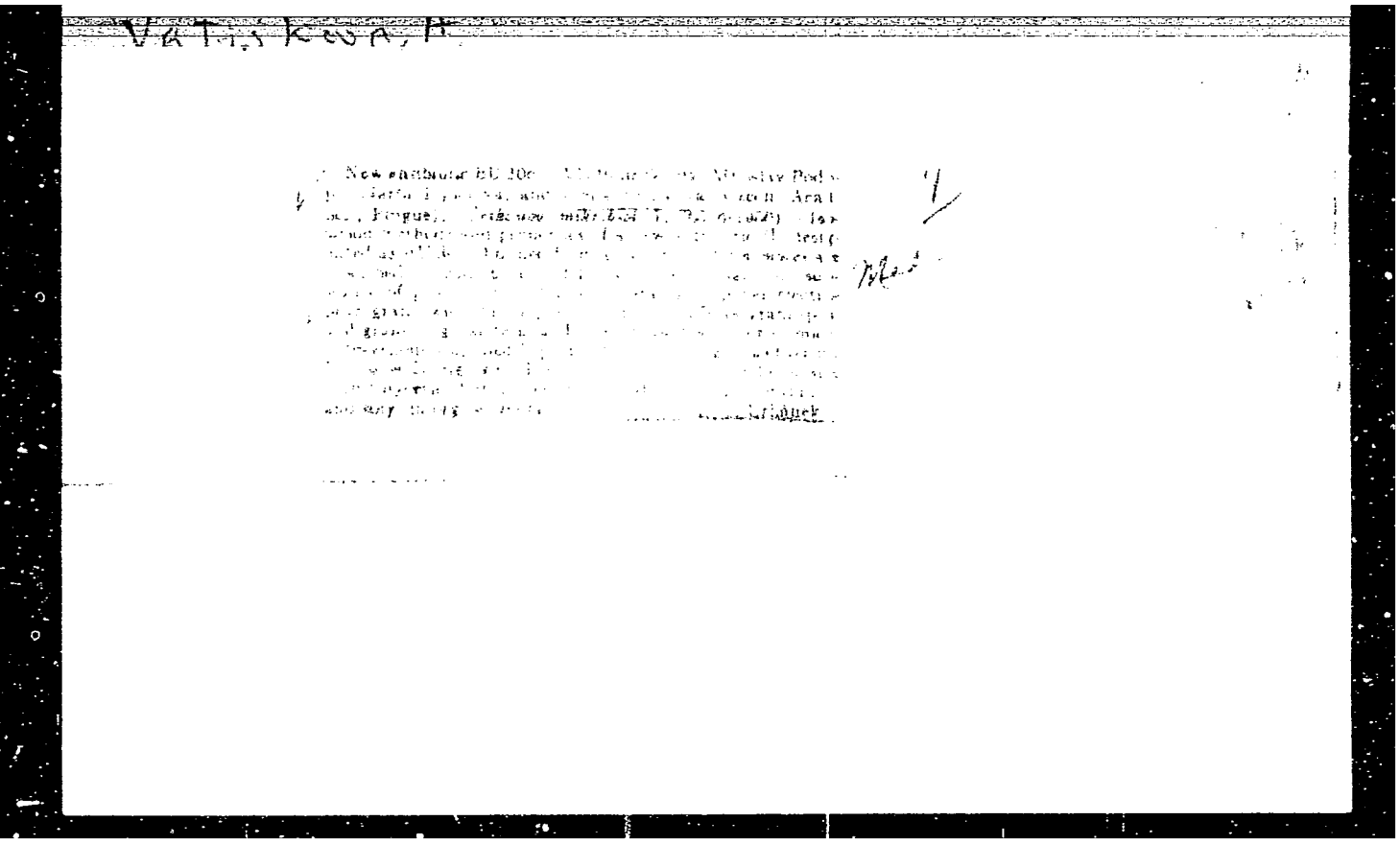
Author : Sevcik, V.; Podojil, M.; Vrtiskova, A.
Inst : -
Title : Use of Paper Chromatography for the Study of New Antibiotics.

Orig Pub : Folia biol. (Ceskosl.), 1957, 3, No. 4, 218-225

Abstract : No abstract.

Card 1/1

New antibiotic BU 271. Vladimir Ševčík, Miloslav Podojil, Marta Kyselová, and Alena Vrtišková (Czech. Acad. Sci., Prague). *Českoslov. mikrobiol.* 1, 223-8(1958).—The antibiotic BU 271 (I) obtained from an undefined actinomyces is a colorless substance which does not dialyze. Stains on paper with bromophenol blue, and acts predominantly on gram-pos. bacteria. In the antibacterial spectrum and [illegible] I resembles [illegible] but differ in stability, color, and method of isolation. I is not [illegible] by addn. of [illegible] and [illegible] [illegible] 15 min. Toxicity in [illegible] [illegible] mg./kg. [illegible]



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Characteristics of the course of rabies in a province. Veterinariia 39 no.5:63-65 My '62 (MIRA 18:1)

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POLONY, R., VRTYAK, O. YA., KOPPEL, Z., and AVGUSTINSKIY, V. (Veterinary Bacteriological Laboratory and Veterinary Faculty, Kosice, Czechoslovakia)

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Method for controlling the fulfillment of the output norms in weaving.

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